

Arroyo Cleanup Gets Boost

■ **Pollution:** Now that the site near Jet Propulsion Laboratory is on the Superfund list, it may take five years to clear waste scientists probably dumped.

PASADENA

By EDMUND NEWTON
TIMES STAFF WRITER

You can see it from the ridge overlooking the dusty scrub of the Arroyo Seco and the Jet Propulsion Laboratory's jumble of buildings.

There are a couple of towers—like a pair of big grain silos—some tanks, and a network of pipes and ducts. City officials sometimes call it "Willy Wonka's Chocolate Machine."

It's Pasadena Water and Power's Arroyo Seco water treatment plant, and the only visible evidence of the existence, somewhere beneath the dry river bed, of a wad of toxic waste dumped there 40 or 50 years ago, probably by rocket scientists.

The U.S. Environmental Protection Agency placed the site on the Superfund list last week, making it a national environmental cleanup priority. Sometime in the next three to five years, if the EPA abides by its recent commitment to speed up the

cleanups, workers will complete the job of sopping up the chemicals and solvents there.

"It's a victory for the environment," said Charles Thomas, the city's environmental affairs coordinator.

By most accounts, the chemicals were probably dumped there between 1945 and 1958, when JPL was developing the Corporal and Sergeant missile systems for the U.S. Army and Explorer 1, the first U.S. satellite.

In those days, the practice was to dispose of chemical wastes in cesspools that were designed to allow liquid wastes to seep into the surrounding soil. "We've identified a number of cesspools by talking with old employees and retired employees and by looking at aerial photographs," said Charles Buriel, JPL's manager for environmental affairs.

The problem was, experts discovered years later, that JPL sits at the edge of a stream bed through which water drains from the San Gabriel Mountains, recharging the Raymond Basin to the south.

The Raymond Basin is a 40-square-mile underground water system extending from northern Pasadena into parts of Arcadia and South Pasadena. It is a source of tap water for communities in the western San Gabriel Valley and, if Pasadena's Devil's

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Gate Dam project is implemented, it would become a potential storage area for vast amounts of water imported from other parts of the state.

The city closed four wells after its technicians discovered in 1980 that city wells southeast of JPL were contaminated with traces of the toxins trichloroethylene (TCE), perchloroethylene (PCE) and carbon tetrachloride (CTC).

The four wells were reopened two years ago, when JPL agreed to pay for the \$1.2-million treatment plant and to contract with Calgon Carbon Corp. to run it.

But a large quantity of underground water remains untreated. The Superfund project would be designed to clean all the water and return it to the ground.

According to city officials, the problem is a relatively minor one, nowhere nearly as difficult to remedy as the pollutants which have spread through aquifers in the central and eastern parts of the San Gabriel Valley.

"The chemicals are at very low levels," said Willard Bangham, the city's assistant general manager for water systems. "I'm not sure that they would have been detectable before the early 1980s, when the technology was developed to find things like that."

JPL, which is currently administered by Caltech for the National Aeronautics and Space Administration, does not officially acknowledge responsibility for the waste. NASA, JPL's prime funding source, would be responsible for paying the still-unknown cost of the cleanup if the contaminants are traced to rocket experiments.

"Throughout the years, there have been dry cleaning establishments, garages, any number of people who used the same kinds of industrial solvents," Buriil said. "The common practice in the 1940s and '50s was to dump them in a pit out back. I'm not sure such a thing as a hazardous waste landfill even existed in those days."

JPL has refused assistance to the Lincoln Avenue Water Co., which operates two contaminated wells a few blocks east of Pasadena's treatment plant. The company paid \$200,000 for its own treatment plant last June.

"Based on our information so far," Buriil said, "the contamination affecting the Pasadena wells is not impacting the Lincoln Avenue wells."

But Bob Hayward, general manager of Lincoln Avenue Water Co.,

which has 4,100 customers in northwest Altadena, contends that the difference is one of political and financial clout, not geological evidence. "The same source of pollution is contaminating our wells, but Pasadena got action because it threatened litigation," Hayward said.

The Superfund designation means that JPL will conduct tests to determine exactly what the source of the chemicals is and how they have spread. Then, with the approval of federal, state and regional regulatory agencies, it will develop a cleanup plan.

Preliminary tests show little soil contamination, Buriil said. "Of course, we're in the very infant stages of the tests," he added. "We've taken five borings so far."

The city's treatment plant pumps ground water through carbon filters and, at the same time, blows air through it. "When the air hits the water, it strips or volatilizes the chemicals," Bangham said. Then the treated water is directed into the city's water system.

If contaminants haven't lodged in the soil, a similar treatment plant could possibly cleanse all of the accumulated ground water, officials say.

Although environmental experts say the Arroyo Seco problem is a relatively minor one, it has the potential to escalate, they say.

If JPL is the source, the contaminants are clearly spreading to the east, officials say. "There's a plume [of contamination] there," Thomas said, "but I don't think anybody knows how big it is yet. It still has the potential to run off into the stream and provide significant exposure to people and wildlife."